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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,558	10/27/2003	Ravi Ram Vedula	201ES034A	2423

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LEGAL DEPARTMENT
NOVEON, INC.
9911 BRECKSVILLE ROAD
CLEVELAND, OH 44141-3247

EXAMINER

SERGEANT, RABON A

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 09/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/694,558

Applicant(s)

VEDULA ET AL

Examiner

Rabon Sergeant

Art Unit

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-19, 22, 23, 25-27 and 29-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-19, 22, 23, 25-27, 29-43, and 45-50 is/are rejected.
- 7) ☒ Claim(s) 44 and 51 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

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1. The terminal disclaimer filed on June 19, 2006 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of any patent issuing from U.S. application 10/880,001 has been reviewed and is accepted. The terminal disclaimer has been recorded.
2. Claims 37-43 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Applicants have amended claim 37 to specify that the polyether intermediate is polyethylene glycol and have further removed the previously claimed structural limitations for the intermediate. However, applicants' specification states at page 5 that the polyether intermediate has a repeating structure, such that the structure repeats 11 to 115 times. Since applicants' intermediate is no longer limited to this structure, the claims encompass embodiments that are not supported by the application as originally filed.

3. Claims 37-43 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for polyurethanes wherein the polyethylene glycol intermediate corresponds to the structure set forth within page 5 of the specification, does not reasonably provide enablement for polyurethanes derived from polyethylene glycol intermediates that fail to correspond to the structure set forth within page 5 of the specification. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

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Applicants have failed to provide adequate guidance for the use of polyethylene glycol intermediates that are outside the scope of the intermediates set forth within page 5 of the specification. One of ordinary skill would not be able to practice the invention with polyethylene glycols outside the scope of those disclosed and have a reasonable expectation of obtaining polyurethanes having the desired properties of the invention without having to resort to undue experimentation. Given applicants' disclosure, one would expect that the invention would have to be practiced with reactants that correspond to those disclosed; however, applicants' claims are not so limited. *In re Wands*, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988).

4. Claims 1, 4, 6-8, 13-19, 23, 25, 27, 29-36, and 45-50 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the production of thermoplastics from difunctional reactants, does not reasonably provide enablement for the production of thermoplastics from higher than difunctional reactants. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims. Applicants' claims are drawn to the reaction of hydroxyl terminated polyether intermediates, which encompass higher than difunctional reactants; however, applicants have failed to teach how to make a thermoplastic using such reactants. The use of higher than difunctional reactants will introduce crosslinks into the polymer which in turn will promote thermoset properties. *In re Wands*, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988).

5. The examiner has considered applicants' response to this rejection; however, applicants have only addressed this rejection with respect to the diisocyanate component and have failed to address the fact that the polyether intermediate encompasses higher than difunctional species.

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6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-4, 6-19, 22, 23, 25-27, and 29-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Shah ('852).

Patentees disclose a thermoplastic polyurethane produced from MDI, a polyethylene glycol having applicants' claimed molecular weight, and a hydroxyalkylated aromatic chain extender, such as hydroquinone bis(2-hydroxyethyl)ether. Applicants' claimed ratio of reactants are disclosed as well. Patentees further disclose that the polyurethanes may be produced using extrusion equipment at temperatures that meet those claimed. See abstract; columns 1, 2, and 4; and especially Elastomer E within Example 2. Applicants' claimed properties are considered to be inherently possessed by the disclosed compositions, since they are derived from the same reactants as used by applicants.

8. Applicants have argued that the claims encompass a mole ratio of chain extender to polyether intermediate which is outside the range taught by Shah. However, this argument is without merit in view of the molar amounts of reactants disclosed for Elastomer E of Example 2. It appears that applicants have assumed that formula (a) of Shah is based upon moles; however, the formula is based on weight. When one considers the molar amounts for Elastomer E (1.03 moles of diisocyanate, 0.4 moles of polyethylene glycol, and 0.6 moles of chain extender), it is clear that the ratio of chain extender to polyether intermediate meets applicants' claims.

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9. The prior art rejections in view of WO 00/23492 have been withdrawn in view of the instantly claimed chain extender to intermediate molar ratio.
10. The prior art rejections in view of Foss have been withdrawn in view of the disclosed ratio of extender to polyol at column 15, lines 50-53 and the disclosed unsuitability or disadvantages of using a one shot process at column 16, lines 11+.
11. Claims 44 and 51 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication should be directed to R. Sergent at telephone number (571) 272-1079.

R. Sergent
September 2, 2006


RABON SERGENT
PRIMARY EXAMINER